

August 26, 2011

To: Executive Board

Subject: **Fleet Maintenance Audit Results**

Recommendation

Receive and file the results of the Fleet Maintenance Audits conducted in June 2011 and historical audit results for the period July 2009 through January 2011.

Analysis

Foothill Transit regularly conducts maintenance audits of its buses utilizing an independent contractor. That contractor, Transit Maintenance Consultants (TMC), has performed those services for Foothill Transit for over 16 years. Each audit includes a physical inspection of a group of buses and a review of their maintenance records. Foothill Transit also conducts a full inspection, called a “turnover” audit, when an operations contractor changes. The “turnover” audit, if needed, is a complete fleet inspection of vehicle conditions and maintenance documentation.

The independent maintenance audit is an innovative, efficient, and effective approach that allows Foothill Transit to quantify the quality of contractor maintenance efforts. All vehicles must meet or exceed industry as well as Foothill Transit standards for safety, mechanical condition, preventive maintenance inspections, appearance, and maintenance record keeping. These inspections are in addition to and complement California Highway Patrol (CHP) annual fleet and terminal audits required by law. A more detailed description of the audit standards can be found in **Attachment A**.

Inspection Criteria

The following charts identify a summary of noted defects for both operations contractor locations. Thirty buses, 25 of which are pre-selected with the other five randomly selected from each location are chosen for inspection and each inspected bus may have multiple defects, so the numbers reported reflect total defects, not buses. The charts detail:

- On-time PMIs – This is the percentage of preventive maintenance inspections that were completed within the maximum 6,500-mile window as required by Foothill Transit. As a reference, the bus manufacturers and the Federal Transit Administration (FTA) allow a 6,600-mile maximum.
- Recommended Out Of Service – This category identifies the most serious out of service items such as brakes and steering. These items must be repaired before the bus resumes service.
- Customer Standard Out Of Service – This category identifies items that would cause a Foothill Transit Service Quality Inspector to remove a bus from service, and

includes such items as graffiti, spotted windows, scratches, dirty or damaged upholstery, etc.

- Foothill Transit Standards – This category identifies items that do not comply with Foothill Transit contractual maintenance standards but would not require a bus to be removed from service nor constitute a safety hazard. Some examples might be a worn fan belt, a dirty air conditioning filter, faded paint, worn upholstery, etc.
- HVAC and ADA Observations – Heating, Ventilating and Air Conditioning (HVAC) and Americans with Disabilities Act (ADA) observations have been segregated from the summary totals into their own line items during the inspection cycle. Foothill Transit requires that the HVAC systems be fully operational. State and federal law require that ADA items such as wheelchair lifts and public address systems be fully operational at all times.

After each inspection the contractor is supplied with a detailed inspection report and is responsible for making any repairs identified within a reasonable period of time. All “Out of Service” items pertaining to Safety or Customer Standard must be repaired before the bus resumes service.

July 2009 / June 2011 Inspections

Regular inspections of thirty-bus samples from the Pomona and Arcadia facilities including an additional five non-revenue vehicles were completed during the months July 2009 through June 2011.

- Pomona – Historically First Transit Pomona has had inspections that were unrivaled in the industry. The July 2010 and January 2011 inspections were out of character for this location, however, with a higher number of overall defects identified. The rise in total defects may have been a symptom of an older fleet since the large majority were oil leaks. The June inspection saw dramatic reductions in defects in three of five categories and the other two areas with only minor variances. The overall inspection quality showed positive overall improvements.
- Arcadia – At the last inspection we announced that Arcadia had a new Maintenance Manager and that the January 2011 inspection was his first. That Maintenance Manager is now gone and during this inspection the maintenance program at Arcadia was under the control of the MV Regional Maintenance Team while a new manager search was underway. As of the date of this board report a new Maintenance Manager has been hired. Previously it was clear that MV’s performance was weak in every area most notably in On-Time PM Inspections. Directly after this inspection, MV’s National and Regional Directors of Maintenance met with Foothill Transit Director of Operations and Maintenance as well as MV’s local G.M. and Maintenance Manager to discuss the issues. A number of action

items were developed to improve the overall performance. This included a complete review with all MV maintenance staff of Foothill Transit expectations regarding maintenance performance at that location. Efforts to raise the quality of the fleet maintenance efforts at Arcadia produced dramatic results. The June 2011 audit saw improvements in all but one area and in fact the audit resulted in numbers not seen in over two years. On-time PMI numbers are still low and recommended out of service numbers increased but the overall result of the fleet saw impressive positive improvements.

Audit Summary for First Transit Pomona

	July 2009	October 2009	January 2010	July 2010	January 2011	June 2011
On-time PMIs	99.33%	99.26%	98.06%	99.29%	100%	98.46%
Recommended Out of Service	1	0	0	6	2	3
Customer Standard Out of Service	3	3	7	13	7	4
Foothill Transit Standards	26	34	22	76	86	41
ADA Observations	0	3	4	7	7	4
HVAC Observations	0	0	0	5	4	6

Audit Summary for MV Transportation Arcadia

	July 2009	October 2009	January 2010	July 2010	January 2011	June 2011
On-time PMIs	99.43%	96.79%	88.46%	95.20%	75.34%	83.49%
Recommended Out of Service	2	4	9	5	5	9
Customer Standard Out of Service	11	7	9	20	14	1
Foothill Transit Standards	46	123	53	96	119	59
ADA Observations	10	4	5	5	10	3
HVAC Observations	0	3	3	10	11	5



Summary

The maintenance audit process has proven to be a valuable tool to evaluate the state of the maintenance of the fleet. That same process also allows Foothill Transit to make strategic moves to resolve issues identified during the audit and the third party impartial results assist Foothill Transit, First Transit, and MV Transportation in improving the quality of maintenance efforts applied to the Foothill Transit fleet.

After two decades providing bus inspection services Richard Davis, the owner of TMC, has decided to retire and close the business. This was the last inspection by the TMC team. Procurement activities to select a new contractor for fleet maintenance audits are currently underway.

Budget Impact

Funding for the bus inspection audits is included in Foothill Transit's Fiscal Year 2012 Business Plan.

Sincerely,

George Karbowski
Director of Operations and Maintenance

Doran J. Barnes
Executive Director

Attachment A

FOOTHILL TRANSIT STANDARDS

In order to ensure that Foothill Transit buses are being maintained to the highest level possible, Foothill has established quality assurance criteria. The maintenance consultant will be expected to enforce these criteria and ensure that all vehicles meet minimum standards.

- ◆ BRAKES: Any item relating to the brake system that does not meet acceptable standards. Brake adjustments, worn linings, and air leaks are automatic “Out of Service” items.
- ◆ AIR SYSTEMS: Must be clean and properly maintained. There are no exceptions.
- ◆ STEERING AND SUSPENSION: Steering box, lines, king-pins, tie rods, radius rods, bellows, valves, bushings, shocks, etc., that are worn close to or past the limits dictated by good preventive/predictive maintenance practices are considered “Out of Service”.
- ◆ ENGINE AND TRANSMISSION: Dirty engine compartments, any fluid leaks, worn hoses, lines or belts, exhaust leaks, excessive smoke, etc. are unacceptable.
- ◆ AIR CONDITIONING: Must be fully operational. No defects will be acceptable.
- ◆ WHEELCHAIR LIFTS: Must be fully operational. No defects will be acceptable.
- ◆ DESTINATION SIGNS: Must be fully operational and readable by the public. No more than 5 percent of the pixels can be out, provided that the full sign is still readable.
- ◆ INTERIORS: Must be clean and graffiti-free. No torn, stained, or dirty seats, dirty or damaged rear or side panels, loose handrails, loose screws, etc. Any scratches of 1/4 inch or longer may be considered to be graffiti. Damaged or missing decals are not acceptable.
- ◆ WINDOWS: Must be clean, spot, and graffiti-free. Windows must be fully operational.
- ◆ EXTERIORS: Must be clean and free of all body damage, including tree scratches. Faded or torn bumpers and fender flares, excessive soap build-up, water spots, and damaged or missing decals are not acceptable.



- ◆ **TIRES AND WHEELS:** Tread depth must not be less than 3/32 inch. Tire height between inner and outer tires on the same side must not differ by more than 3/32 inch. Leaking seals, loose or missing studs and lug nuts, and dirty wheels are not acceptable.
- ◆ **PREVENTIVE MAINTENANCE INSPECTIONS:** The contractor shall conduct routine preventive maintenance inspections and servicing at intervals of 6,000 miles or the recommended vehicle manufacturer's specifications, whichever is lower. The contractor shall conduct more extensive inspection and servicing at 12,000-mile intervals or as specified by the transit vehicle manufacturer, whichever is lower. The contractor shall conduct an annual or 48,000-mile preventive maintenance inspection containing all items required by the component manufacturers. The contractor shall conduct weekly brake/safety inspections.
- ◆ **APPLICABLE CODES AND REGULATIONS:** Vehicles must be deemed safe for operations on public streets and freeways and meet all requirements of the California Vehicle Code. All parts of vehicles and all equipment mounted on or in the vehicles shall conform to the California Vehicle Safety Standards, California Administrative Code, Title 13, the Americans with Disabilities Act (ADA), and the CHP Motor Carrier Safety Regulations.